Mechanized Conversion Kit Installation Instructions for PC-900

0558008549 **03/2011**

BE SURE THIS INFORMATION REACHES THE OPERATOR.
YOU CAN GET EXTRA COPIES THROUGH YOUR SUPPLIER.

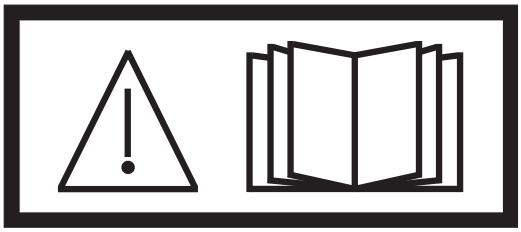
CAUTION

These INSTRUCTIONS are for experienced operators. If you are not fully familiar with the principles of operation and safe practices for arc welding and cutting equipment, we urge you to read our booklet, "Precautions and Safe Practices for Arc Welding, Cutting, and Gouging," Form 52-529. Do NOT permit untrained persons to install, operate, or maintain this equipment. Do NOT attempt to install or operate this equipment until you have read and fully understand these instructions. If you do not fully understand these instructions, contact your supplier for further information. Be sure to read the Safety Precautions before installing or operating this equipment.

USER RESPONSIBILITY

This equipment will perform in conformity with the description thereof contained in this manual and accompanying labels and/or inserts when installed, operated, maintained and repaired in accordance with the instructions provided. This equipment must be checked periodically. Malfunctioning or poorly maintained equipment should not be used. Parts that are broken, missing, worn, distorted or contaminated should be replaced immediately. Should such repair or replacement become necessary, the manufacturer recommends that a telephone or written request for service advice be made to the Authorized Distributor from whom it was purchased.

This equipment or any of its parts should not be altered without the prior written approval of the manufacturer. The user of this equipment shall have the sole responsibility for any malfunction which results from improper use, faulty maintenance, damage, improper repair or alteration by anyone other than the manufacturer or a service facility designated by the manufacturer.



READ AND UNDERSTAND THE INSTRUCTION MANUAL BEFORE INSTALLING OR OPERATING.

PROTECT YOURSELF AND OTHERS!

SAFETY PRECAUTIONS

Users of ESAB welding and plasma cutting equipment have the ultimate responsibility for ensuring that anyone who works on or near the equipment observes all the relevant safety precautions. Safety precautions must meet the requirements that apply to this type of welding or plasma cutting equipment. The following recommendations should be observed in addition to the standard regulations that apply to the workplace.

All work must be carried out by trained personnel well acquainted with the operation of the welding or plasma cutting equipment. Incorrect operation of the equipment may lead to hazardous situations which can result in injury to the operator and damage to the equipment.

1. Anyone who uses welding or plasma cutting equipment must be familiar with:
   - its operation
   - location of emergency stops
   - its function
   - relevant safety precautions
   - welding and / or plasma cutting

2. The operator must ensure that:
   - no unauthorized person stationed within the working area of the equipment when it is started up.
   - no one is unprotected when the arc is struck.

3. The workplace must:
   - be suitable for the purpose
   - be free from drafts

4. Personal safety equipment:
   - Always wear recommended personal safety equipment, such as safety glasses, flame proof clothing, safety gloves.
   - Do not wear loose fitting items, such as scarves, bracelets, rings, etc., which could become trapped or cause burns.

5. General precautions:
   - Make sure the return cable is connected securely.
   - Work on high voltage equipment **may only be carried out by a qualified electrician**.
   - Appropriate fire extinquishing equipment must be clearly marked and close at hand.
   - Lubrication and maintenance **must not** be carried out on the equipment during operation.

SAFETY PRECAUTIONS

WARNING **WELDING AND PLASMA CUTTING CAN BE INJURIOUS TO YOURSELF AND OTHERS. TAKE PRECAUTIONS WHEN WELDING OR CUTTING. ASK FOR YOUR EMPLOYER'S SAFETY PRACTICES WHICH SHOULD BE BASED ON MANUFACTURERS' HAZARD DATA.**

ELECTRIC SHOCK - Can kill.
- Install and earth (ground) the welding or plasma cutting unit in accordance with applicable standards.
- Do not touch live electrical parts or electrodes with bare skin, wet gloves or wet clothing.
- Insulate yourself from earth and the workpiece.
- Ensure your working stance is safe.

FUMES AND GASES - Can be dangerous to health.
- Keep your head out of the fumes.
- Use ventilation, extraction at the arc, or both, to take fumes and gases away from your breathing zone and the general area.

ARC RAYS - Can injure eyes and burn skin.
- Protect your eyes and body. Use the correct welding / plasma cutting screen and filter lens and wear protective clothing.
- Protect bystanders with suitable screens or curtains.

FIRE HAZARD
- Sparks (spatter) can cause fire. Make sure therefore that there are no inflammable materials nearby.

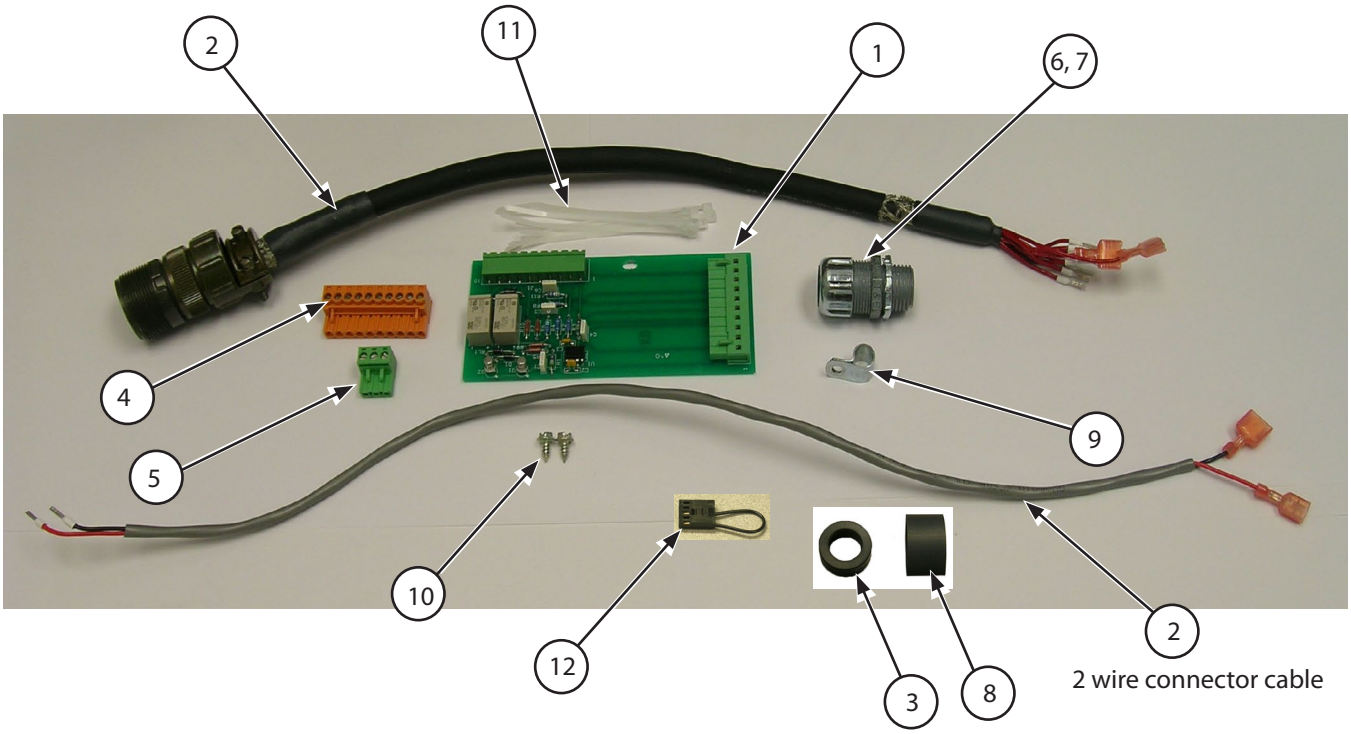
NOISE - Excessive noise can damage hearing.
- Protect your ears. Use earmuffs or other hearing protection.
- Warn bystanders of the risk.

MALFUNCTION - Call for expert assistance in the event of malfunction.

READ AND UNDERSTAND THE INSTRUCTION MANUAL BEFORE INSTALLING OR OPERATING.

PROTECT YOURSELF AND OTHERS!

MECHANIZED CONVERSION KIT INSTALLATION INSTRUCTIONS



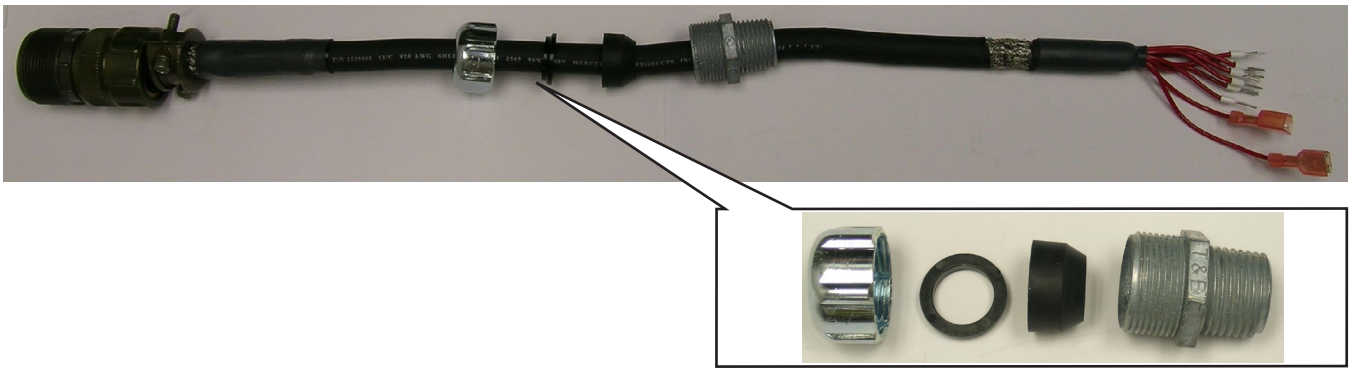
Powercut-900
Mechanized Conversion Kit contents
p/n 0558008284

Item No.	Part No.	Qty	Description
1	0558038337	1	PC BOARD - REMOTE
2	0558008457	1	RECEPTACLE / CABLE ASSY 14 PIN
3	*	1	TOROIDAL CORE
4	*	1	CONNECTOR COMBICON 10 PIN
5	*	1	CONNECTOR COMBICON 3 PIN
6	*	1	STRAIN RELIEF SEALED 1/2" ZINC
7	*	1	LOCKNUT CONDUIT 1/2"
8	*	0.75"	HEATSHRINK 1" BLACK
9	*	1	CLAMP CABLE STEEL .375 DIA
10	*	2	SCREW HEX WSH TAP #8 x .438 RIBBED
11	*	5	TYWRAP SM 4"
12	0558008111	1	KIT JUMPER - MECHANIZED LOGIC

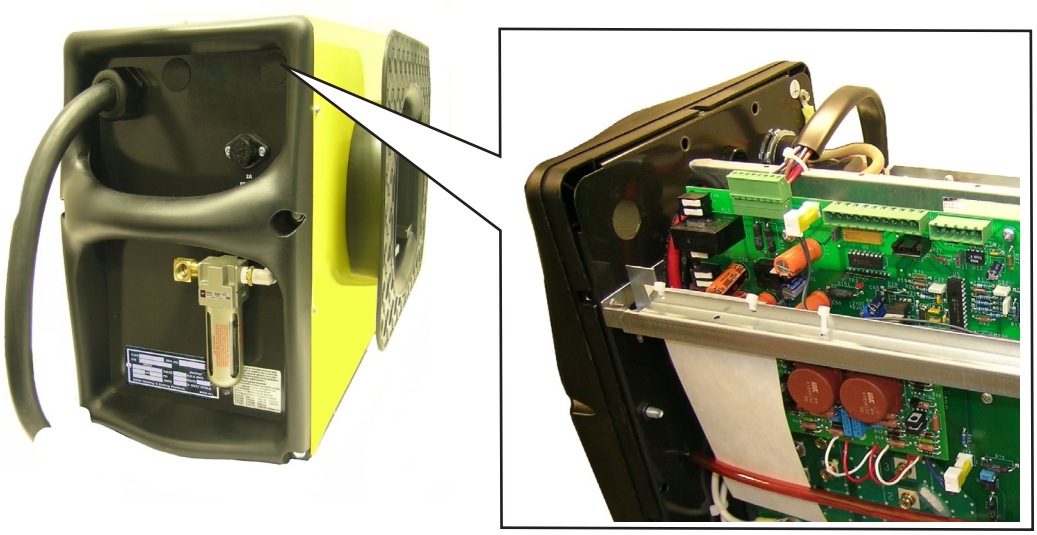
MECHANIZED CONVERSION KIT INSTALLATION INSTRUCTIONS

1. Access the inside of the PC-900 by unscrewing the screws and removing the cover.

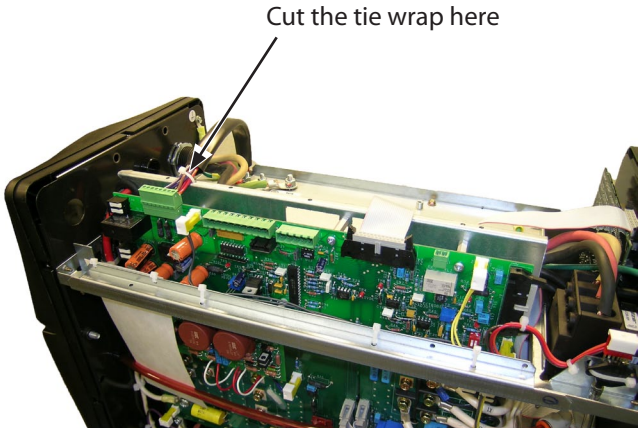
2. Assemble the strain relief onto the 14 pin cable as shown and partially tighten.



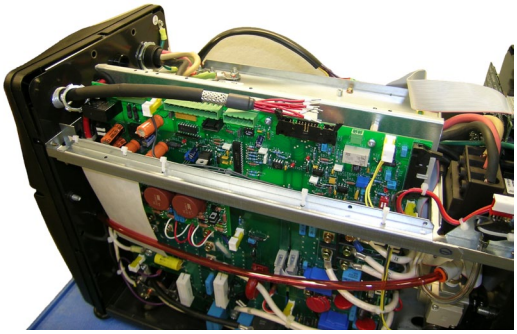
3. Remove the hole plug on the top right side of the back of the unit.



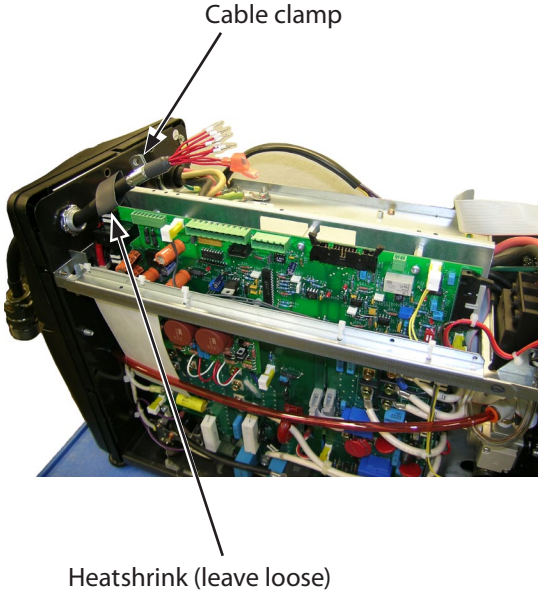
4. Cut the tie wrap, unplug control transformer wires to allow for easier cable routing.

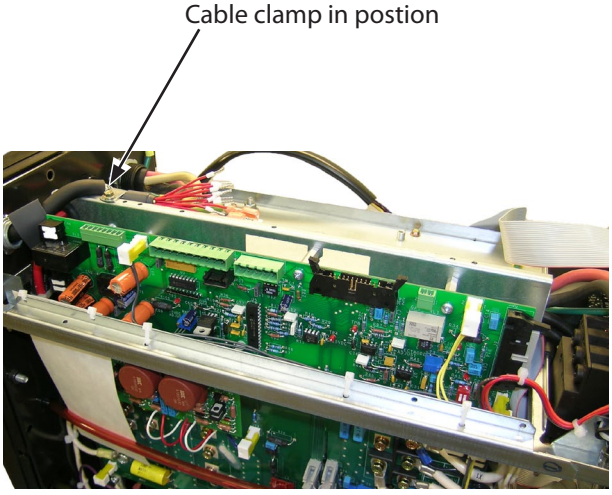


5. Thread the cable through the hole as shown and allow cable to hang loose. Add locknut and partially tighten. Add heatshrink to cable and leave loose, before applying clamp.

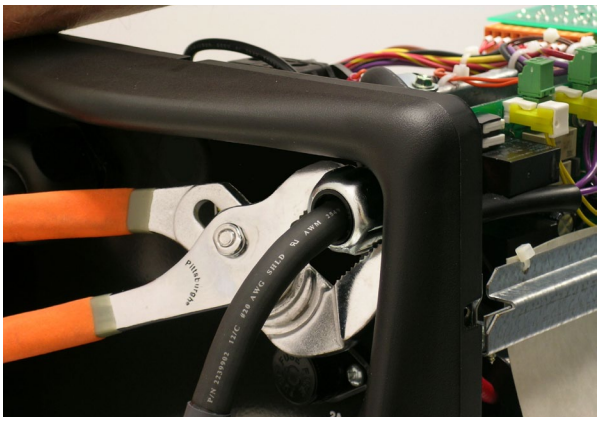


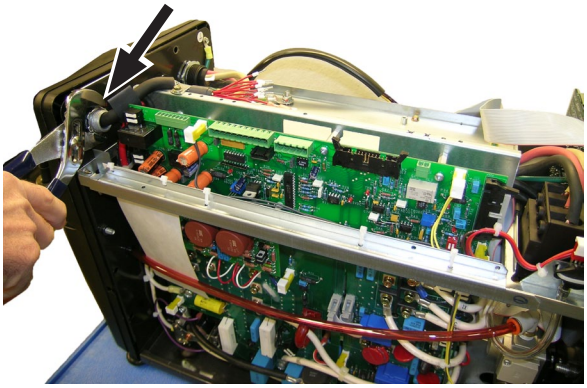
6. Assemble the cable clamp onto the exposed shield area and attach to the frame with the screw provided. Orient clamp downward as shown.

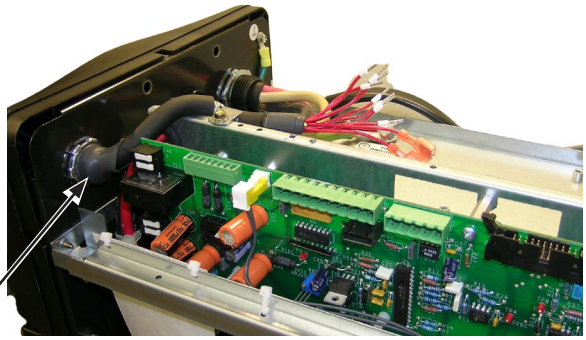




7. Tighten the strain relief nut from the inside first and then tighten the outside strain relief nut. Position heatshrink over threads to prevent power leads from contacting sharp edges. Electrical or other suitable tape may be used if heatshrink gun is not available.

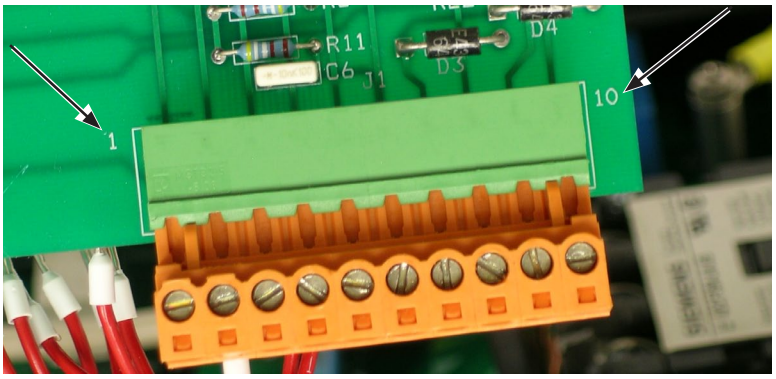


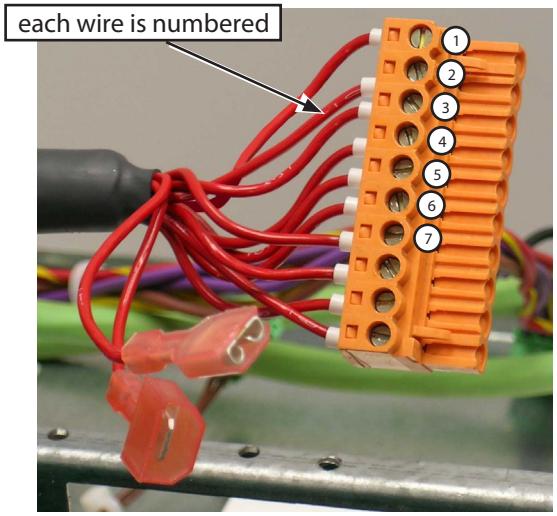




Heatshrink or suitable tape

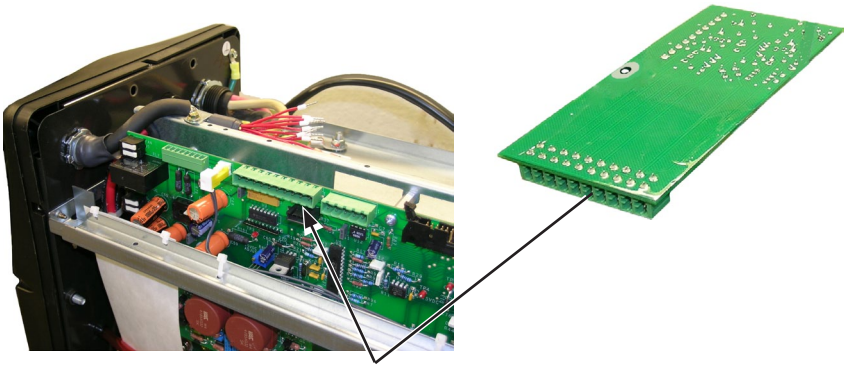
8. <u>Add toroidal core to cable</u> and leave loose, before installing connector. Align the 10-pin connector with the pc board header to identify which end of the connector is pin 1 and therefore ensure proper connections of the 10 cables wires.



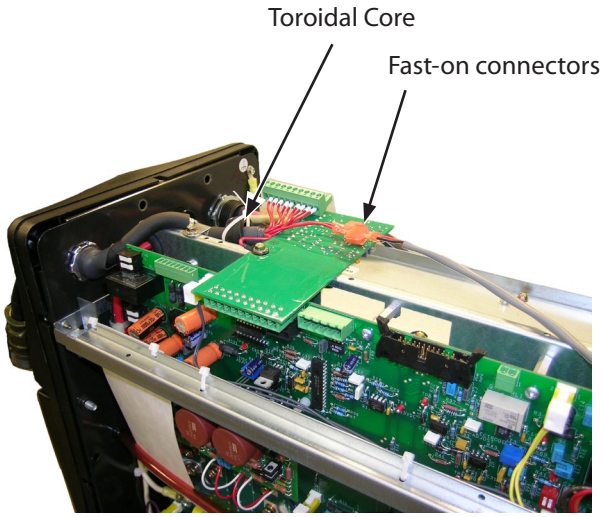


9. Install each wire and tighten. Cable wires are numbered 1 through 10 and must be connected in numerical sequence starting with number 1. The pc board has been stamped with numbers 1 and 10 to show the direction of sequence for the wires.

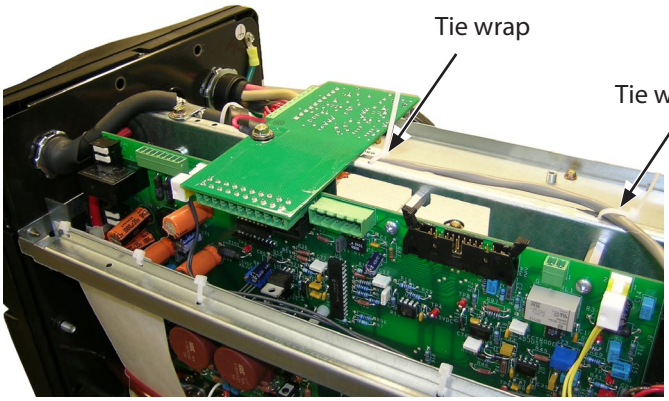
10. Connect the pc board to the main power control board as shown below. Connect the ring terminal from the 14 pin cable and secure the pc board to the frame with the screw provided.



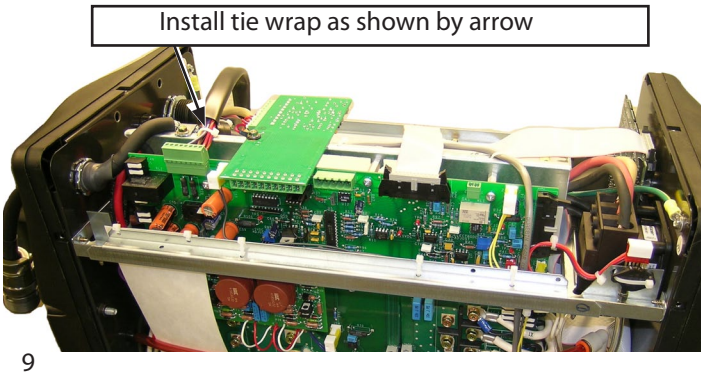
11. Connect the fast-on connectors of the "2-wire cable" to the 14 pin cable. Position and tie wrap toroidal core.



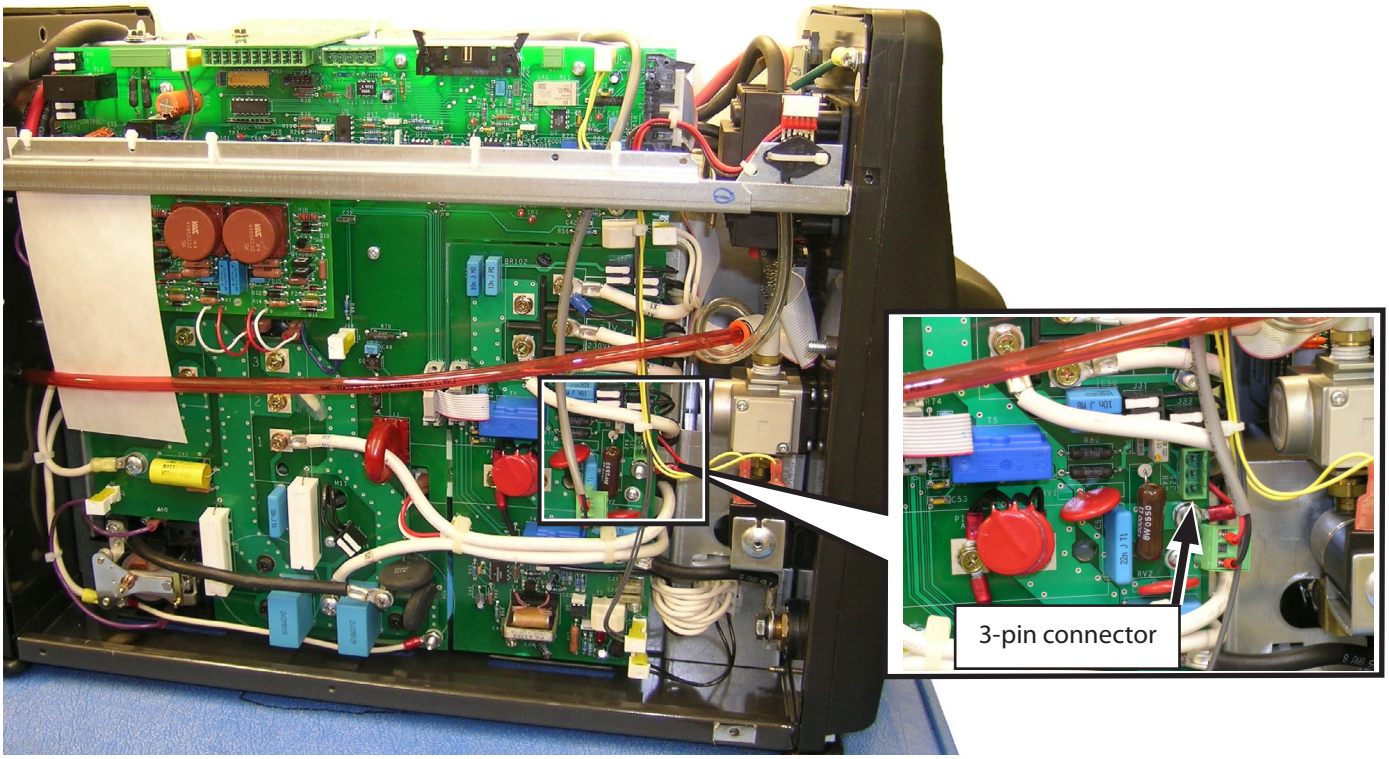
12. Route the "2-wire cable" under the pc board and tie wrap to the frame using the provided holes in the areas shown.



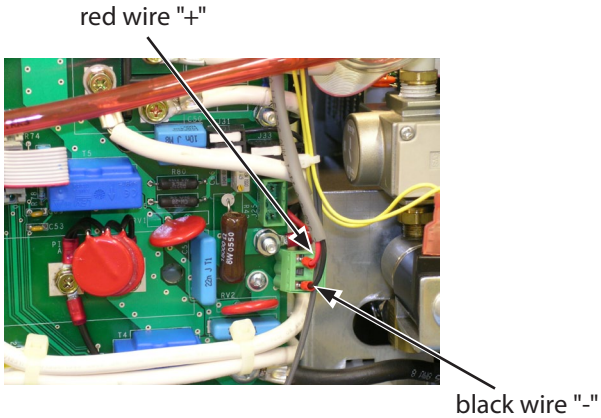
13. Re-install the plug and tie wrap on the previously unplugged wire.



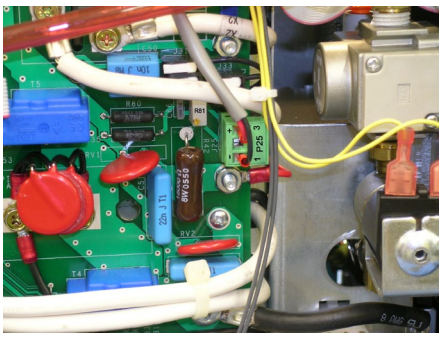
14. Route the "2-wire cable" downward behind the shelf brace.
15. Locate the 3-pin connector on the existing main power control board.



16. Align the 3-pin connector with the pc board header to identify which end of the connector aligns with the "+" and "-" on the pc board. On the connector, insert the red wire to the "+" and black wire to the "-" from the "2-wire cable" as shown and tighten.

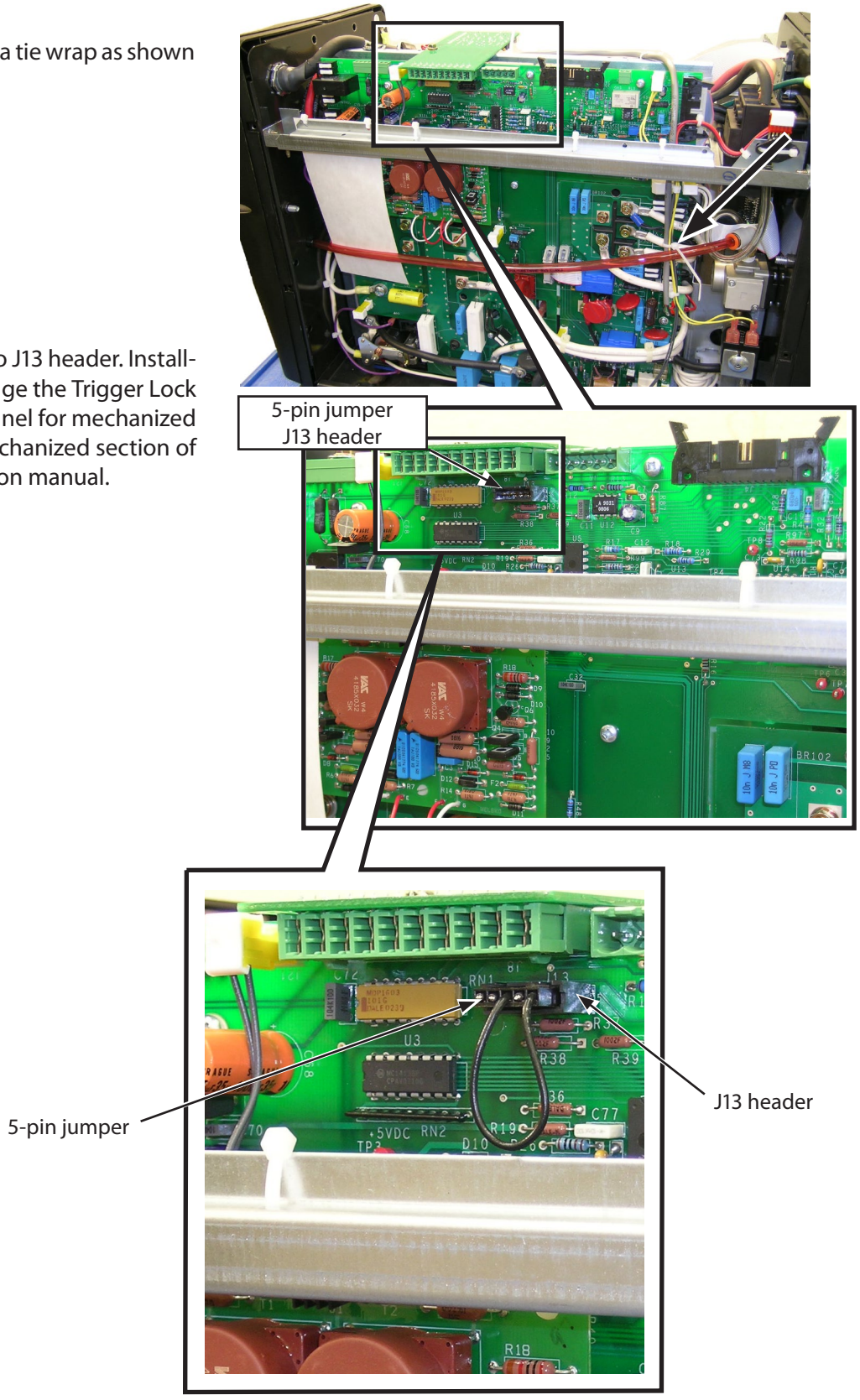


17. Plug in the 3-pin connector on the pc board.



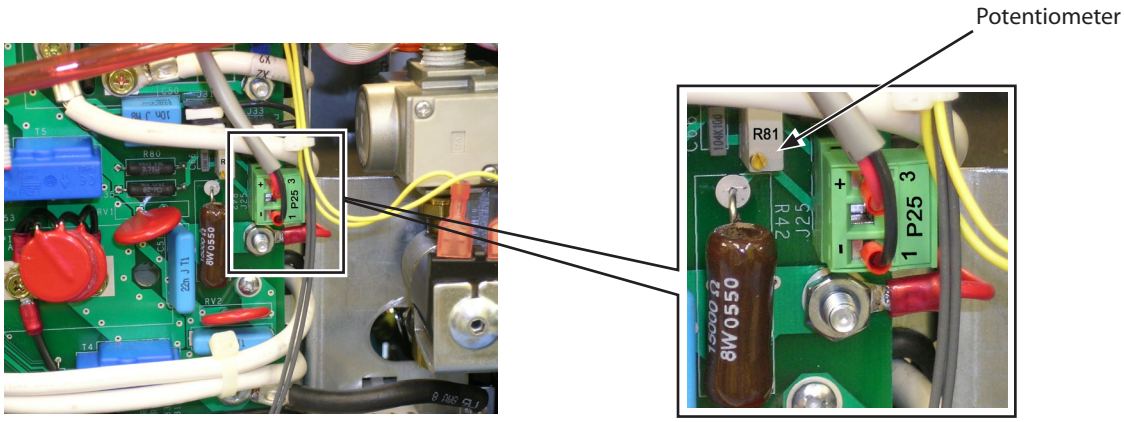
18. Secure the cable with a tie wrap as shown by arrow.

19. Plug 5-pin jumper into J13 header. Installing this plug will change the Trigger Lock switch on the front panel for mechanized logic. Refer to the mechanized section of the machine instruction manual.



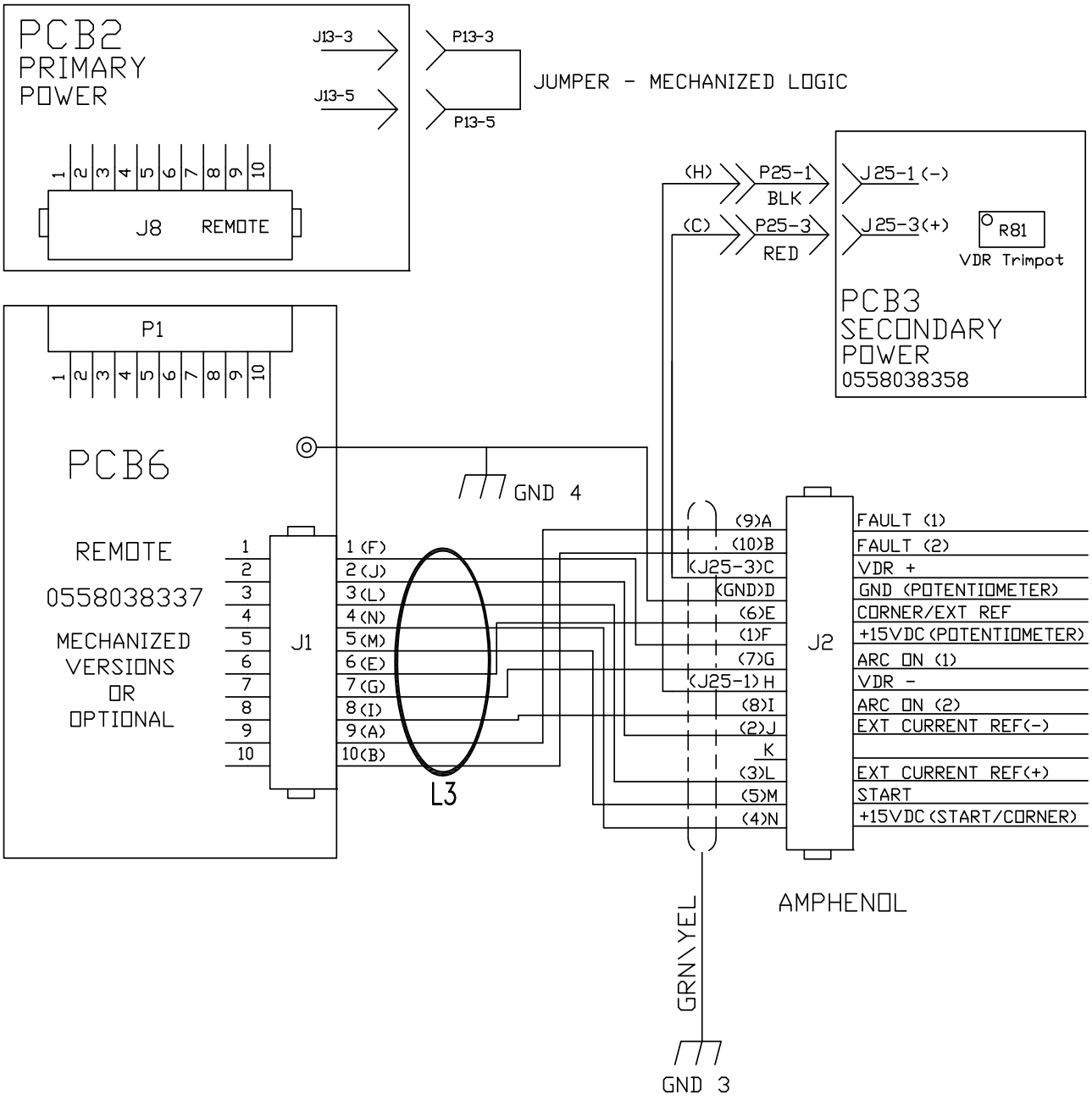
20. Voltage Divider Adjustment: The Voltage Divider or VDR can be adjusted to provide optimum cut capability. More precise cuts can be tuned in by adjusting the potentiometer and making test cuts to gauge accuracy.

    - Place ohm meter leads between P25-1 & P25-3. Set R81 to 750 ohms. (This nominal setting usually performed at pc board calibration).
    - Additional minor adjustments of the potentiometer may be performed to achieve desired cut quality.



21. Trim all tie wraps and replace the unit's cover.

Mechanized Conversion Kit Schematic
PC-900



NOTES

REVISION HISTORY

1. 03/2011 - Updated mechanized conversion kit contents per J. Magee.

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